

**ENGINEERING AND RELATED SERVICES  
JULY 6, 2010**

**STATE PROJECT NO. 736-99-1719  
F.A.P. NO. SPR-0010(034)  
PAVEMENT DISTRESS DATA COLLECTION  
STATEWIDE**

Under Authority granted by Title 48 of Louisiana Revised Statutes, the Louisiana Department of Transportation and Development (DOTD) hereby issues a Request for Qualification Statements (RFQ) on Standard Form 24-102 (SF 24-102), "Professional Engineering and Related Services", revised January 2003, from Consulting Firms (Consultant) to provide engineering and related services. **All requirements of Louisiana Professional Engineering and Land Surveying (LAPELS) Board must be met at the time of contract execution.** One Prime-Consultant/Sub-Consultant(s) will be selected for this Contract.

**Project Manager** – Mr. Chris Fillastre

All inquiries concerning this advertisement should be sent in writing to Debbie. Guest@LA.gov.

**PROJECT DESCRIPTION**

The Project as covered by this Contract shall consist of providing all necessary engineering and related services required to collect and analyze pavement distress data for planning purposes as well as preconstruction engineering.

**SCOPE OF SERVICES**

The services to be rendered for this Project shall consist of the following:

I. General Information

A. Project Description

1. The Consultant shall collect and quantify digital right-of-way and pavement images, roughness data - International Roughness Index (IRI), faulting, rutting, Pavement Distress Data, and differential Global Positioning System (GPS) data - by Control Section log mile for approximately 20,600 directional miles as described under item System Description (Section I.B). The Consultant shall also collect, for the opposite direction, only the right way images not specified for pavement condition analysis on approximately 15,200 miles of the state network. The Consultant will collect and quantify data in one mandatory cycle, and at the option of DOTD, in two subsequent cycles starting in 2010 and ending 2016.

2. The Consultant will follow the schedule of progress as outlined in Section II.B Master Progress/Damages Schedule for this project.

## B. System Description

The approximate directional miles of pavement included in the study are as follows:

Interstate Highway System	1863 directional miles
Arterial/Collector Systems	17677directional miles
Non-State Maintained National Highway System (NHS)	108 directional miles
Performance Monitoring System (HPMS) sample Sections	484 directional miles
Frontage/Service Roads	460 directional miles

The Interstate Highway System consists of 1863 directional miles, and is divided into 56 control sections of which 40% or about 745 directional miles are classified as urban. The arterial/collector systems consist of 17677 directional miles, and are divided into 2592 control sections of which about 23% or 4091 directional miles are classified as urban. The 108 miles of off-system (NHS) routes are all urban sections. The 484 miles of off-system HPMS study sections are distributed throughout the state. Approximate mileage by district:

District 02	1865 miles	District 03	2965 miles
District 04	2594 miles	District 05	2392 miles
District 07	1570 miles	District 08	2975 miles
District 58	1519 miles	District 61	2345 miles
District 62	2369 miles		

## C. The project will consist of 4 tasks:

- 1.Task 1: Preliminary Activities (Section II.E.1)
- 2.Task 2: District Data Collection (Section II.E.2.)
- 3.Task 3: Distress Data Quantification; (Section II.E.3)
- 4.Task 4: Final Documentation (Section II.E.4.)

## II. Base Scope of Services for Pavement Condition Survey

### A. Quality Control Program:

The Consultant shall administer a plan that will assure that data is collected accurately and reflects actual pavement condition, within the precision specified under this section.

1. Equipment calibrations are to be done in accordance with specific manufacturer recommendations. A regular maintenance and testing program of the equipment in accordance with the manufacturer's recommendations shall be performed and documented by the Consultant. Prior to being authorized by the DOTD to collect data in any district, the Consultant's Data

Collection Vehicle (DCV) will be calibrated. The calibrations will be initially accomplished on the DOTD's Trial Sections in the Baton Rouge area. Data acquisition and data evaluation will be performed at least three times on each pavement trial section for the calibration of electronic sensor data. The electronic sensor data will be evaluated for accuracy, under the DOTD supervision, to the DOTD's "South Dakota" style laser profiler and/or a Class I profiling instrument. Such calibration must be maintained for the duration of the data collection (Section II.A.2, of the Base Scope of Services for Pavement Condition Survey). The Consultant will document procedures of how the data was collected and reported to the DOTD in the final report. All calibrations actually done during this project are to be documented (i.e., results from tests are recorded and any corrective action taken shall be explained in detail) and reported to the DOTD as performed and again in the final report.

2. The Consultant shall address the use of verification, or quality control, sections which are selected with known IRI and Rutting or Faulting values. During the first week of data collection in each new district, a verification site shall be selected. The first run of this verification site shall be made as part of the network testing. Starting with the second week of data collection in the district, the verification site will be run and compared with the original data collected previously for that section. Evaluations of these measurements can provide information about the accuracy of field measurements and give insight into needed equipment calibration. These verification, or quality control, sections used during data collection shall be documented in writing and electronically (digital images with electronic sensor data). Such documentation is to be delivered to the DOTD weekly. **Note: Should data collection in any district, by any DCV, not extend beyond a week, the Consultant shall re-calibrate that DCV on the Baton Rouge calibration sites prior to that DCV collecting data in a subsequent district.**
3. The Consultant shall calibrate the DMI (Distance Measuring Instrument) using sites provided by the DOTD. The Consultant must provide all findings, inclusive of the calibration number before the calibration process, the calibration number after the calibration process, location of the calibration site, length of the calibration site, and length of calibration site as measured by the DMI before and after calibration, and list any discrepancies found during the calibration process. Any discrepancies that are found shall be reported to DOTD with the corrective action taken with a detailed explanation. The calibration of the DMI shall be performed and reported weekly to DOTD, and documented in the final report.
4. The Consultant shall monitor and document quality control findings and procedures instituted during the crack detection and quantification procedures.
5. The Consultant will use an inter-rater consistency testing and training plan if manual rating of pavement distresses are used in this project. The Consultant must include a valid plan and test for inter-rater consistency. These consistency tests shall apply to items listed the Pavement Condition / Inventory Survey data collection (Section II). The data quantification process

shall be presented so as to assure rater accuracy and consistency, throughout the state, over the project duration. Consistency means that the data collection and quantification process is applied in the same manner by all raters using the process. The plan must address means to demonstrate and monitor rater consistency throughout the entire data collection process. The Consultant shall be required to have a unique identification of both their DCV's and their raters, so as to facilitate comparison of the consistency of both. The vendor shall report the results of the testing program monthly for the duration of the project and summarized the test results in the final report.

6. The Consultant's digital perspective view and right view camera images, collected every week (i.e. Monday-Sunday), shall be delivered to the DOTD on the following Monday. A DOTD review of such weekly-submitted images will verify "Header information." The Consultant shall be immediately advised by DOTD of any problems with header information so that it may be corrected. DOTD shall also verify that the correct roadway section was surveyed and if any errors are found, the Consultant shall be advised so that the proper section can be surveyed. (Section II.E.2.C.7.b.)
7. The Consultant's pavement view camera image shall be measured with a visual measurement instrument (supplied by the Consultant) under DOTD supervision to determine the actual footprint (length and width) of the image; this shall be performed for each Data Collection Vehicle prior to data collection. That footprint image must be maintained for the duration of the contract. The Consultant shall be required to verify daily that the DCV(s) footprint is the same as the previous day. Such verification shall be documented (i.e., results from tests are recorded and any corrective action taken explained in detail) and reported to DOTD on a weekly basis and summarized in the final report.
8. If required by DOTD, the Consultant shall address the requirements to provide to DOTD a workstation and any training necessary to enable the Department to duplicate the quantification procedure in order to verify quantities reported for a section of road and to store any pavement images to be used in the Department's review of quantified pavement distress data.

**B. Master Progress / Damages Schedule:**

The Consultant shall develop and present a master schedule for the pavement condition data collection and distress quantification for each of the nine (9) districts.

The Master Schedule shall, at a minimum, account for the following:

1. The Consultant shall be allowed to have more than one DCV in use at any given time. Each DCV must meet the requirements as stated in "Multiple Data Collection Vehicles." (Section II.E.2.C.5.)
2. The reporting of quantified pavement distress data shall be completed on a schedule that will allow for no more than two districts' quantified pavement distress data to be delivered for acceptance per month. Timely delivery of data shall begin after the Pilot data has been reviewed and accepted. The Consultant shall use the following table for data delivery:

**October 22, 2010**

**Data delivery set 1**

<b>December 10, 2010</b>	<b>Data delivery set 2</b>
<b>January 7, 2011</b>	<b>Data delivery set 3</b>
<b>January 14, 2011</b>	<b>Data delivery set 4</b>
<b>February 11, 2011</b>	<b>Data delivery set 5</b>
<b>March 18, 2011</b>	<b>Data delivery set 6</b>
<b>March 25, 2011</b>	<b>Data delivery set 7</b>
<b>April 8, 2011</b>	<b>Data delivery set 8</b>
<b>May 17, 2011</b>	<b>Data delivery set 9</b>

3. Data collection cannot begin before notice to proceed. Data collection schedule will be determined during preliminary activities. At the option of the DOTD (Section III.B.), Oil Spill Recovery designated trucking routes will be collected first in Districts 02, 03 and 07.
4. Whenever the DOTD determines that re-runs are necessary to correct image quality or header information (sections II.A.6. and II.E.2.C.7.b.), the DOTD shall advise the Consultant.
5. Following the reporting of quantified pavement distress data for any district, the Department shall advise the Consultant if the district is accepted. If so, that district will satisfy the delivery schedule of section II.B.2. If there are problems that cause the district to not be accepted, DOTD shall advise the Consultant of the problems, and of the need to resolve such problems. Once advised of such a need to resolve a problem, the Consultant shall have no more than 14 calendar days to do so. Any days exceeding 14, measured from the date of notification of the problem by the Department, shall be counted as being subject to damages as per (Section II.B.6).
6. Failure to deliver pavement distress data in accordance with Section II.B will subject the Consultant to the damages summarized below:
  - a. Failure to report the required number of districts within the time frame of Section II.B.2 shall subject the Consultant to damages at \$300.00 dollars per day, per district, to a maximum of ten (10) days. Failure to complete the Consultant delivery of all nine (9) districts' quantified pavement distress data by May 17, 2011 shall subject the Consultant to damages at \$500.00 dollars per day, to a maximum of ten (10) days.
  - b. Failure to complete the contract delivery of the final report by June 15, 2011 shall subject the Consultant to damages at \$300.00 per day until all deliverables have been accepted, to a maximum of ten (10) days. All reports shall be delivered in hard copy format and in electronic format (Word 2007) (.doc) on external hard drives (USB 2.0), or other approved media, appropriate in both size and compatibility

#### C. System Configuration and Methodology

The positioning of the sensors and the method of calculating rut depth, IRI, Faulting on JCP pavements and GPS data shall be as directed by DOTD.

#### D. Data Requirements

1. Electronic Sensor Data

The following table contains the summary of electronic sensor data that is to be collected. The following table will be the minimum specifications for each type of data that is to be collected.

**Summary of Data Collection Requirement for Sensor Data**

	<b>Roughness</b>	<b>Rut depth</b>	<b>Faulting</b>
<b>Scope</b>	All pavements	Asphalt surfaces	Jointed Concrete
<b>Definition</b>	Longitudinal Profile, both wheel paths	Rutting of each wheel path	Elevation difference across joint (trailing slab lower)
<b>Sampling</b>	Max. 1 ft	Max. 4 ft 40 points Min.	all transverse joints
<b>Calculations &amp; Statistics</b>	IRI, each wheel path and average of both wheel paths	Each transverse profile of both wheel paths, for section report average maximum	Each wheel path absolute elevation difference averaged for each joint, for section report average
<b>Units</b>	inches/mile	inches (nearest 1/10th inch)	inches (nearest 0.04 inch)
<b>Equipment Configuration</b>	Lasers & accelerometers, both wheel paths	Laser Rut Measurement System (or other approved device)	Lasers in Right wheel path
<b>Standards</b>	ASTM E950, HPMS Field Manual Class II		
<b>Precision &amp; Bias</b>	Max. error of 5% bias or 20 inches/mile (whichever is less)	Contractor to provide	Contractor to provide
<b>Initial Verification</b>	Section comparison of Longitudinal Profile with Class I profiling instrument and DOTD's S.D. laser Profiler; (see section II.A.1)	Test section comparison with field measurements provided by DOTD, (see section II.A.1)	Test section comparison with field measurements provided by DOTD, (see section II.A.1)
<b>Ongoing Quality Monitoring</b>	QA/QC Sections; (see section II.A.2)		
<b>Special Requirements</b>	Correct/report low speed sections; capability of monitoring data collection in real time in the DCV	the capability of monitoring data collection in real time in the data collection vehicles ; see II.B.1.a	the capability of monitoring data collection in real time in the data collection vehicles

- a. Rutting shall be measured by an INO Laser Rut Measurement System (LRMS), mounted on the DCV(s) on 100% of all asphalt-surfaced roadways. The sampling frequency shall be a maximum of 4 feet. A minimum of 40 points shall be used to produce the transverse profile. Consultant shall have the ability to measure any edge drop off / high shoulder (i.e. measured points that are not in the intended lane for rutting data collection) from the data and report these in separate columns. The positioning of the sensors/scanners and the method of calculating rut depth shall be submitted to DOTD for approval. Raw rutting data shall be collected so that a rut depth is automatically calculated and stored on an on-board computer for pieces of road that do not

exceed fifty-two feet (i.e. 0.01 miles). This data will then be aggregated into 0.10-mile increments. The Consultant shall report the maximum and the average rutting values for an average 40 point profile, for each wheel path, for each 0.10-mile increment.

- b. Roughness Data: Field roughness data shall be taken longitudinally in both wheel paths for 100% of all roadways. Roughness data shall be acquired using a Class II laser type profiler. Measured output will be given in International Roughness Index (IRI) units (inches/mile). IRI shall be supplied and calibrated using the Quarter Car Simulation Approach. IRI values shall be reported for each tenth (.10) of a mile increment. The Consultant shall report separately the average of the left and right wheel paths values, and the standard deviation of left and right wheel paths. The Consultant shall address how often and how many individual IRI calculations will be made that will yield the reported IRI at every .10 of a mile. Maximum reporting value for IRI shall be 955 inches/mile.
  - c. Faulting Data: Field-faulting data shall be taken longitudinally one to three feet from the outside edge of pavement for 100% of the roadway lane on all jointed concrete surfaces. Faulting data will be reported to the nearest 0.04 inch over each .10-mile increment. The Consultant shall report the maximum positive, maximum negative, the absolute average and the number of faulted joints in each corresponding .10-mile increment. If the "approach" slab is higher than the "departure" slab, faulting will be reported as a positive (+) fault if the "approach" slab is lower than the "departure" slab, faulting will be reported as a negative (-) fault. Vendor shall not report values found to be less than .20 inches.
2. Pavement Distress Cracking
- The following table contains the summary of Pavement Distress Cracking data that is to be collected. The following table is the minimum specification for each type of distress:

Distresses for Pavements with Asphalt Concrete Surfaces	
<u>Distress Type</u>	<u>Units of Measure</u>
a) Cracking:	
1. Alligator (Fatigue) cracking	Sq.Ft. (Wheelpath)
2. i) Block Cracking	Linear Ft.
ii) Longitudinal Cracking	
iii) Longitudinal Cracking (Wheelpath)	
iv) Transverse Cracking	
v) Reflective Cracking @ Joints	
b) Patching and Potholes:	
1. Patch\Patch Deterioration	Sq. Ft. & Count
2. Potholes	Sq. Ft. & Count
3. Blowups	Count

Distresses for Pavements with jointed and Continuously Reinforced  
Portland Cement Concrete Surfaces

<u>Distress Type</u>	<u>Units of Measure</u>
a) Cracking:	
1. Longitudinal Cracking	Linear Ft.
2. Transverse Cracking	Linear Ft
b) Miscellaneous Distress:	
1. Patch\Patch Deterioration	Sq. Ft. & Count
2. Punchouts (CRCP only)**	Sq. Ft. & Count
3. Blowups	Sq. Ft. & Count

\*\*CRCP-stands for Continuously Reinforced Concrete Pavement

The maximum and minimum values for each distress item will be established during Task 1: Preliminary activities (Section II.E.1.). All distresses shall be evaluated and reported on .10-mile increments. The Consultant shall use the Louisiana Protocols for Automated Distress Collection, the Distress Identification for Long-Term Pavement Performance Project Manual (SHRP-338), with its appropriate changes and adaptations, and the Louisiana Manual for Pavement Distress Identification for identifying distress. The Consultant shall report condition data for all of the approximately 20,600 directional miles, which is to be reported by Control Section on a DOTD District by District basis. Visual distress identification and quantification in real time from the DCV will not be allowed.

E. Pavement Condition / Inventory Data Collection / Quantification / Reporting

**1. Preliminary Activities (Task 1)**

A. Consultant Responsibilities

1. The Consultant shall attend meetings and discussions with DOTD personnel to review DOTD policies, procedures, and guidelines for the project and to familiarize the Consultant with the DOTD's Control Section Referencing Method. The Consultant in conjunction with DOTD shall develop and finalize invoicing and delivery plan.
2. The Consultant shall collect and report data on several calibration test sites; shall initiate and test the Quality Control Program; and shall calibrate raters and or rating schemes for automated crack detection software in identifying typical highway pavement types and distress classifications.
3. Cameras are to be calibrated and aligned to meet DOTD specifications for this project. Once camera positioning and angle are accepted by DOTD, they must be maintained for the course of the project. Any deviation of the accepted camera positioning and alignment may result in re-collection of affected control sections.
4. Provide all necessary traffic control needed during the course of calibration testing. The Consultant shall be responsible for all traffic control as per the U.S. Department of Transportation - Manual of Uniform



Traffic Control Devices for Streets and Highways (MUTCD) and safety related procedures for the mutual protection of the Consultant's personnel, DOTD employees, and the public. The Consultant shall provide seats for DOTD personnel in the Data Collection Vehicle(s). The occupants and DCV(s) must comply with all Louisiana statutes that regulate vehicle operation (i.e. seat belts, insurance, driver's license, operational permits, oversized vehicle permits, speed limits, etc.). Provide an approved storage media to the DOTD in Baton Rouge, LA. The approved storage media will be established at the Management System Section. DOTD Management Systems Section shall receive an approved storage media with sufficient capacity to store the all District perspective view, right view and pavement view for all pavements, accompanied by all associated files and databases with supporting files. The approved storage media shall have the ability to connect to the DOTD network via an ethernet connection with its own IP address; The media shall be formatted properly to enable the automatic retrieval of a specific segment of road, viewing of its image, be compatible to allow linear measurements from both perspective and right view images and the digitizing of still frame-displayed images on to a DVD recorder. (Section II.E.3.C.2). Note: These approved storage media will be DOTD's property after the completion of the project.

5. Provide software and training for the software used in the automated quantification of distresses for the images stored on approved storage media as directed for up to four DOTD employees (Section II.E.3.C.2)

#### B. DOTD Responsibilities

1. Identification of roadways for the calibration test and the types of data to be collected for each type of roadway.
2. Provide Consultant with DOTD's dTIMS CT import database.
3. Provide Consultant with the Louisiana Protocols for Automated Distress Collection, the Distress Identification for Long-Term Pavement Performance Project Manual (SHRP-338), with its appropriate changes and adaptations, and the Louisiana Manual for Pavement Distress Identification for identifying distress.

#### C. Deliverables

The Consultant's deliverables for Task 1 shall include:

1. A quality control program that is documented and published by the Consultant. This document will be presented to DOTD for review and approval prior proceeding with Task 2: District data collection.
2. A copy of the processed results of the calibration test runs (IRI correlation results and pavement distress data).
3. Test loading of processed pavement condition data into the DOTD's dTIMS CT import database.
4. An updated Master Schedule plan for the collection and quantification of the field condition data for all nine (9) districts.

5. Digitized images on external hard drives (USB 2.0), appropriate in both size and compatibility for the calibration sites.
6. Raw electronic sensor data, on external hard drives (USB 2.0) appropriate in both size and compatibility for the calibration sites.
7. The Consultant shall provide software that allows the user to automatically retrieve a specific segment of road and view its right of way and pavement images by entering the control section and the control section log mile. The Consultant shall also provide software that allows the user to make linear measurements on the perspective view and right view camera images. The approved storage media shall have the ability to transfer the digital pavement view images, perspective, and right view camera, images, and other pavement distress data and/or sensor data, to DVD disks (4.7 GB or approved equivalent). The Consultant shall provide training to DOTD for operating the software and shall furnish camera-ready copies of all manuals pertaining to its operation and use.
8. All images (JPEG) must be viewable on individual workstations through viewer software and compatible to the Department's existing perspective view web browser (thumbnail images).
9. Draft Preliminary Activities Report, detailing the results of calibration sites, Rater calibration, results of data test load, etc.
10. Approved storage media installed at the DOTD Management Systems offices located at 1201 Capital Access road, Baton Rouge, LA. Appropriate training for workstation.

## **2. District Data Collection (Task 2)**

### **A. Consultant's Responsibilities**

1. Collect Rutting, IRI, Faulting, Pavement Distresses and GPS data on the appropriate pavement type for all of the pavement condition assessment roads.
2. Collect clear, digital pavement, perspective view and right view camera images for all of the studied roads.
3. Report the locations of all construction zones and or other route deviations where no data collection was therefore possible.

### **B. DOTD's Responsibilities**

1. Identify roadways to be studied and the types of data to be collected for each type of roadway
2. Supply the Consultant with copies of the Department's control section database file, and district control section base map; Listing of GPS coordinates for start and end of each control section. DOTD shall also supply electronic copies of the HPMS, NHS and service/frontage road base maps and databases.
3. Supply at least one DOTD representative to assist in the navigation on the State Highway System when deemed necessary by DOTD
4. Determine when conditions are acceptable for data collection, either by being in the Consultant's DCV or by a review of the digital images afterward.

5. Determine when images are acceptable, by a weekly DOTD review of submitted images. (Section II.A.6)
- C. General Requirements
1. All data is to be collected by the use of the DOTD Control Referencing System. All data shall be collected in the right lane of the ascending direction of Control Section log mile on undivided two, three, and 4 lane roads and from the right lane in each direction on divided roads with four or more lanes. Additionally, there will be a limited number of two lane roadways that will be run in both directions. These sections will be identified and location referenced prior to the beginning of the data collection cycle. DCV shall begin collection of digital images not less than .10-mile before the beginning of each control section and shall stop collection of digital images not less than .10-mile passed the end of the control section.
  2. All nine (9) district pavement distress data collections and quantified data deliveries must be completed by June 1, 2011.
  3. Data from construction zones, detours and other diversions from the correct travel lane shall not be used in calculating one-tenth mile averages and other statistics, but shall be reported in the database. The Consultant shall report the locations of construction encountered during data collection that affects the data collection process. Consultant shall also count all bridges and quantify the totals by 0.100 mile.
  4. The Consultant shall have the capability of monitoring data collection in real time in the data collection vehicles so as to minimize data errors.
  5. If the Consultant proposes to use multiple DCV's, it shall be demonstrated that all vehicles are calibrated to produce measurement differences (IRI, rutting and faulting data) of 5% or less between vehicles. This demonstration must be documented and reported in writing to the DOTD whenever the DCV first enters any district or returns to the project after leaving the state. Vehicles must be identified with a unique number and that number must accompany all data reported from that vehicle.
  6. DOTD shall provide pavement type (i.e., asphalt, composite, and jointed concrete) information for all on-system routes. The Consultant shall present a methodology for validating this pave type information prior to, or during, data distress quantification. Before any distress quantification is done, the Consultant needs to be certain what the pave type is so as to quantify the correct distress types. (Section II.D.2).
  7. Digital Images:
    - a. The Consultant shall collect clear, high resolution digital pavement images for all of the studied roads. The Consultant shall furnish the images to DOTD on external hard drives (USB 2.0) appropriate both in size and compatibility on a weekly basis. Images shall be collected with a minimum of four cameras: two camera(s) oriented normal to the pavement for distress identification/quantification; one camera approximately horizontal and parallel to the pavement (Right of Way (ROW) view), which shall show the entire roadway, shoulders,

roadway signs, and as much of the right-of-way as practical, and one camera, approximately horizontal and facing the right side of the road (towards the shoulder), perpendicular to the direction of travel of the data collection vehicle, which shall show as much of the right of way as practical. The perspective and right view cameras shall be compatible to allow linear measurements to be made from the images. The Consultant shall supply all software and electronic files needed to measure and quantify asset data from the perspective view and right view camera images. Use of time codes, distance measurements, and geo-coordinates along a highway for positive location identification, (i.e. Control Section log mile and GPS coordinates), shall synchronize all digital images collected. All images shall be identified to the nearest one-thousandth mile (5.28 feet) or better.

- b. The perspective and right view cameras color digital images shall be collected and delivered in JPEG format. The perspective images shall show the right of way and as much as possible of the left and right shoulder; the right view camera images shall show as much of the right of way as possible. The right of way and right view camera images shall be collected at a maximum interval of 0.005 miles (26.4 feet). The resolution of the collected images shall be 1920 pixels x 1080 pixels. The Consultant shall be responsible for providing a means to simultaneously view and process (i.e., play) all associated images; the provided means shall include the synchronization of the pavement, right of way and right view images. The provided means shall also be able to operate on most personal computers thus allowing virtually any user to review the images and data from an IBM compatible personal computer, as well as the Department's perspective web viewer in thumbnail format and shall be 480 x 277 pixels or as approved by the DOTD. The provided means shall include the necessary software licenses (if applicable) for the DOTD headquarters office and all district offices. The data shall be summarized to 0.100 miles and also be synchronized with the pavement, right of way and right view images. The right of way and right view images shall be provided on external USB 2.0 hard drives or other approved storage media. The Consultant shall attach distinguishing information to each image and data point specifically identifying District Number, Parish Number, Control Section, Route, Direction, Control Section Log mile, Speed, Date, and Global Positioning System (GPS) coordinates (X, Y and Z).
- c. The Consultant shall collect the most accurate (GPS) coordinates possible. The use of base stations and alternate data sources shall be required to obtain certifiable evaluations throughout the state. In Districts 02, 03, 07, 61 and 62 the Consultant shall use the Louisiana CORS network for the correction in the differential GPS calculations. The Consultant shall adhere to all specifications and subscription requirements of the LSU's Louisiana Spatial Reference Center needed to ascertain the GPS calculations.

- d. All exterior mounted cameras must be capable of collecting images during normally encountered fair weather conditions in Louisiana. This includes, but is not limited to, temperature and moisture conditions that cause fogging and condensation on the camera lens. Camera enclosures shall have heating devices or other means to eliminate fogging and condensation on the camera lens. In addition, camera lens or enclosures shall be cleaned regularly to prevent a buildup of road debris and bugs.
- e. Pavement Cameras: The Consultant shall use camera(s) which are configured to capture at minimum of 12ft transverse road sections with 2 mm resolution or previously approved equivalent. The imaging system shall be configured to allow for the optimum contrast and visibility of both small longitudinal and lateral road cracks
- f. The resolution of pavement images shall be sufficient to identify cracks of 0.078 inch (2mm) width in both the transverse and longitudinal directions in all pavements. The Consultant must demonstrate that the resultant digital image has a resolution to identify cracking of 0.078 inch (2mm) width when traveling at survey speeds. The Consultant shall provide these images at the highest resolution possible, such as provided in a progressively scanned image. This shall include the disclosure of equipment specifications, inclusive of any other proprietary information needed to support this resolution requirement. The meeting of this requirement is the responsibility of the Consultant and shall be accomplished during the calibration procedures. The images shall be indexed to control section number, direction and control section log mile. All data collected for rutting, roughness, and pavement distress data shall be indexed for viewing to the pavement, perspective and right view images.
- g. Downward Pavement, Forward Perspective and Right View Images shall not be collected during times when the visibility of cracking and other distress forms are continuously obstructed by road conditions. This includes, but is not limited to, water on the pavement surface and either sand or mud on the pavement surface, etc. Locations with unacceptable image quality shall be collected again at no additional cost to the department.

#### D. Deliverables

The Consultant's deliverables for task 2 shall include:

- 1. The Consultant shall furnish the images to DOTD on external hard drives (USB 2.0) appropriate both in size and compatibility on a weekly basis. The weekly delivery shall be accompanied by all required files need for viewing the images with the software to enable the automatic retrieval of a specific segment of road, viewing of its image, allow verification of "Header information", image clarity (i.e. darkness, extreme sun light rain or standing water or other debris in roadway). Raw data from the DCV's electronic sensors (rutting, IRI, faulting, and GPS data) shall also be

included within this deliverable as well as software to view raw data files. Locations with unacceptable image quality shall be collected again at no additional cost to the department.

2. All weekly equipment calibrations test results (i.e. DMI, Laser Profiler, video footprint, etc.)
3. All weekly electronic sensor verification results (i.e. re-run of sections that had been run the previous Monday to determine that the DCV is still in calibration).

### **3. Distress Quantification (Task 3)**

#### **A. Consultant's Responsibilities**

1. Quantify distresses
2. Evaluate and report pavement distresses on .10 mile increments
3. Supply data that matches the length of the control sections in DOTD's Location Reference System

#### **B. DOTD's Responsibilities**

1. Provide to the Consultant the Louisiana version of protocols for automated distress data collection, The Distress Identification for Long-Term Pavement Performance Project Manual (SHRP-338), and the Louisiana Distress Identification manual.
2. Supply at least one DOTD representative to review distress quantification and assist the Consultant's personnel in the coordination of the quality control program.

#### **C. Distress Quantification Requirements**

1. Reporting Increments: All distresses shall be evaluated and reported on .10-mile increments. DOTD shall provide, and the Consultant shall use, the Louisiana version of Protocols for Automated Distress Data Collection, the Distress Identification for Long-Term Pavement Performance Project Manual (SHRP-338), with the appropriate changes and adaptations, and the Manual for the Identification of Pavement Distresses for Louisiana. The Consultant shall report condition data for all of the approximately 20,600 directional miles, which are to be reported by control section on a DOTD district by district basis. As previously required in "Quality Control Program" (Section II.A.), the DOTD shall test and verify (as part of the quality control program) the consistency of several quantified processed data. Such verification by the department may result in the Consultant being notified to resolve problems with the quantified distress data. (Section II.B.5)
2. The Consultant shall supply an approved storage media at the DOTD Management Systems offices located at 1201 Capital Access road, Baton Rouge, Louisiana. The approved storage media will be for DOTD's use in viewing the digital pavement images and for verifying the Consultant's distress data reduction. This approved storage media must allow the DOTD to review and verify the quantification results of distresses from pavement images provided by the Consultant. The Consultant shall also

provide software that allows the user to quantify pavement distress data in the same procedure use by the Consultant's personnel in the distress quantification for this project. The approved storage media shall have the ability to transfer the digital pavement view images, perspective images, and other pavement distress data and/or sensor data, to DVD disks (4.7 GB or approved equivalent). The Consultant shall provide training to DOTD for operating the software and shall furnish electronic copies of all manuals pertaining to its operation and use. DOTD shall have full use of the approved storage media and software for the duration of this project. The Consultant shall maintain, repair and update the approved storage media for the duration of the project.

3. For each district, the Consultant shall quantify and summarize distresses and report those quantified distresses (along with the rutting, roughness, faulting, and GPS data) as outlined in Section II.D, Data Requirements. The Consultant shall load into the DOTD's dTIMS CT import database and query for errors before delivery. The dTIMS CT import database containing the summarized district data is to be delivered by the Consultant's personnel who are responsible for preparing and loading the summarized data for the dTIMS CT import database. The Consultant's personnel shall assist DOTD in the review of the data and immediately reschedule for testing any section found to be invalid. Failure to deliver, as per the Master Progress/Damages Schedule (section II.B.), shall subject the Consultant to damages of either \$300.00 per day, per district to a maximum of ten (10) days or \$500.00 per day to a maximum of ten (10) days.
4. DOTD shall participate with the Consultant in administering the Consultant's Quality Assurance and Quality Control plan that will monitor the Consultant's quantification and assessment of pavement distress data. The Consultant is required to work with DOTD and incorporate the results of the QA/QC plan into the data quantification processes.

#### D. Deliverables

The Consultant's deliverables for Task 3 shall include:

1. All quantified pavement condition assessment data properly loaded into the dTIMS CT import database (provided to the Consultant during Task 1 Preliminary activities) and reported in .10-mile increments as required. Data is to be reported on external hard drives (USB 2.0) appropriate in both size and compatibility or other approved media.
2. Electronic File Database (the interval the maximum of 0.004 mile) contains the standard identification information (Elementid, District, Parish, Route, Direction, Csect, From and To) and the Electronic data fields (Grade, Crossfall, faulting, roughness, rutting, GPS location, occurrence of bridge, construction zone, lane deviation, occurrence of railroad crossing, and lane width)

3. Image Database (image interval maximum of every 0.004 mile) contains Rawdata filename, Route, Csect, Direction, From Chainage, To Chainage, Video Image Path and GPS location information.
4. Web Image Viewer files and web application installation files
5. Asset inventory measuring software files and software installation
6. Statewide pavement condition assessment associated files, lane pavement surface views, pavement distress quantification results, perspective and right view for all pavement condition assessments shall be delivered on external hard drives (USB 2.0) appropriate both in size and compatibility or other approved media, which will be loaded on DOTD's own server. This statewide delivery shall be formatted properly to enable the automatic retrieval of a specific segment of road, viewing of its image, allow verification of quantified distresses, end user shall be able to view the minimum required 40 point rut profile (one per right of way image), and be compatible to allow linear measurements to be made from the images and the digitizing of still frame-displayed images on to a DVD recorder (section II.E.3.C.2). Raw data from the DCV's electronic sensors (rutting, IRI, faulting, pavement distress, and GPS data) shall also be included within this deliverable.
7. Each District shall be delivered on its own approved storage media with sufficient capacity to store the district's perspective and right camera views (i.e. right-of-way view, without the pavement views) for all pavements, accompanied by all associated files and databases with supporting files. The approved storage media shall have the ability to connect to the DOTD network via an ethernet connection with its own IP address; The media for each of the 9 district deliverables shall be formatted properly to enable the automatic retrieval of a specific segment of road, viewing of its image, be compatible to allow linear measurements from both perspective and right view images and the digitizing of still frame-displayed images on to a DVD recorder. (Section II.E.3.C.2). Note: These approved storage media will be DOTD's property after the completion of the project.
8. All nine (9) quantified district pavement distress data deliveries must be completed by June 1, 2011.

#### **4. Final Documentation (Task 4)**

The Consultant shall provide the following final documentation by June 15, 2011:

- A. A final delivery of all quantified data (i.e. previously delivered district data inclusive of any subsequent required revisions) for all districts, on external hard drives (USB 2.0) appropriate in both size and compatibility.
- B. Copies of all raw electronic files generated during the course of the project with software to view and convert to viewable text files.
- C. Copies of all reports, routing sheets, field notes, documents relating to or impacting the project, etc.



- D. All reports shall be delivered in hard copy format and in electronic format (Word 2003) (.doc) on external hard drives (USB 2.0) appropriate in both size and compatibility.

**III. Additional Services** – these services shall be optional, and performed, at the DOTD’s discretion.

**A. HPMS pavement data collection cycle:** The Consultant shall collect the HPMS/NHS pavement distress data fall of 2011 for the 2012 reporting requirements as outline in HPMS mandate. HPMS pavement data collection cycle consist of collecting at least Perspective Camera View, faulting, roughness, rutting, GPS location, occurrence of bridge, occurrence of railroad crossing, lane deviation and pavetype. Data collection and delivery shall be completed by April 30, 2012. At DOTD’s discretion, the first subsequent data collection of the HPMS/NHS pavement distress data shall be collected in the fall of 2013; data collection and delivery shall be completed by April 30, 2014. At DOTD’s discretion, the second subsequent data collection of the HPMS/NHS pavement distress data shall be collected in the fall of 2015; data collection and delivery shall be completed by April 30, 2016. The 5002 directional miles are as categorized as follows:

Interstate Highway System	1863 directional miles
Non-Interstate State Maintained National Highway System (NHS)	2571 directional miles
Non-State Maintained National Highway System (NHS)	108 directional miles
Performance Monitoring System (HPMS) sample Sections	460 directional miles

**HPMS Deliverables**

1. As needed Perspective Camera images for the purpose of quality control checking delivered data delivered by external hard drives (USB 2.0) appropriate in both size and compatibility or other approved media.
2. All quantified pavement condition assessment data properly loaded into the approved HPMS dTIMS CT import database (provided to the Consultant during Task 1 Preliminary activities) and reported in .10-mile increments as required. Data is to be reported on external hard drives (USB 2.0) appropriate in both size and compatibility or other approved media.
3. Electronic File Database (the interval the maximum of 0.004 mile) contains the standard identification information(Elementid, District, Parish, Route, Direction, Csect, From and To) and the Electronic data fields (Grade, Crossfall, faulting, roughness, rutting, GPS location, occurrence of bridge, construction zone, lane deviation, occurrence of railroad crossing, and lane width). Data is to be reported on external hard drives (USB 2.0) appropriate in both size and compatibility or other approved media.

4. Image Database (image interval maximum of every 0.004 mile) contains Rawdata filename, Route, Csect, Direction, From Chainage, To Chainage, Video Image Path and GPS location information. Data is to be reported on external hard drives (USB 2.0) appropriate in both size and compatibility or other approved media.
5. Rawdata files and software to view and convert rawdata files to usable data format. Data is to be reported on external hard drives (USB 2.0) appropriate in both size and compatibility or other approved media.

**B. Ground Penetrating Radar:** Ground penetrating radar surveys of road networks provide the engineer or asset manager with a cost-effective and comprehensive overview of pavement structure. It provides a traffic speed, non destructive testing method to obtain pavement layer thickness and material types.. GPR data shall be collected and processed during the 2010-2011 data collection cycle.

GPR data will be collected using a multi-channel digital radar system across the specified roadways. We recommend collecting data using two dipole (ground coupled) antennae operating at centre frequencies of 900 MHz and 1.5 GHz meaning that pavement layers greater than 4 inches thick can be resolved to a depth of approximately 3 feet below the pavement surface. We recommended ground coupled antenna as the equipment can operate simultaneously without obscuring either the right of way or pavement video survey equipment such as an air coupled antenna would. However the antenna choice and frequency can be discussed and altered at the request of the department upon award of contract. The GPR profile will be positioned so that the collected data points are coincident with the core locations.

The GPR equipment will be integrated into the data collection vehicle to allow simultaneous collection of pavement surface condition (as appropriate) and pavement construction information. The GPR will be connected to the data collection vehicle's DMI and inertial corrected GPS systems, meaning that the position of all datasets will be coincident. The GPR equipment will be set up to collect one scan (consisting of both frequencies) every ~1½ feet (~0.5m) along the pavement. Verification cores shall be taken when necessary to verify pavement thickness.

Following processing and analysis, derived pavement construction information (layer thickness and type) for each section will be reported at:

- The beginning of the section
- 10th mile (~161 m) increments
- The position of major step changes in layer thickness (greater than 100 mm)
- Where anomalies occur in the GPR data

- The end of each section

Information on material type will be in the generic major engineering categories such as: asphaltic material, Portland cement concrete, granular subbase and cement bound subbase.

Information shall be supplied and delivered in an Access database, including the GPR and core data.

### **GPR Deliverables**

1. All core images (picture of location of core, picture measuring core and unique identifier, and picture of hole that core came from). Data is to be reported on external hard drives (USB 2.0) appropriate in both size and compatibility or other approved media.
2. The DOTD approved Core Database linked to images above and core report. Data is to be reported on external hard drives (USB 2.0) appropriate in both size and compatibility or other approved media.
3. The DOTD approved GPR database containing derived pavement construction information. Data is to be reported on external hard drives (USB 2.0) appropriate in both size and compatibility or other approved media.
4. Rawdata files and software to view GPR rawdata files and convert to a usable format.

### **C. Collection of Highway Inventory Assets:**

In the first cycle of data collection, the Consultant shall supply the DOTD with roadway geometrics and feature data to develop a GIS based highway inventory used to support planning activities. This includes the collection of all features defined below along approximately 20,600 directional miles as described under item System Description (Section I.B). The Consultant shall use and provide software that allows for collection of highway inventory assets, make linear measurements and gather GPS point locations on the perspective view and right view camera images. All data collected shall be locatable using the Linear Reference System Identification (LRSID) provided by DOTD. All data must have the ability to be exported to an appropriate geodatabase and shape files for use in GIS applications. To accomplish this task the Consultant shall work with DOTD in creating a Highway Inventory Asset Manual which will show in detail the procedures that the Consultant shall use in collecting each HPMS Data item along with procedure used to create a geodatabase from the collected data items. Then the Consultant shall use these procedures documented in the Highway Inventory Asset Manual to collect the HPMS Data items and create a Geodatabase.

HPMS Data items collected include:

- Number of Travel Lanes
- Type of HOV operations
- Number of HOV Lanes in both directions
- Presence of Right Turn Lanes
- Presence of Left Turn Lanes
- Posted Speed Limit
- Sections with Toll Charge
- Type of Toll
- Count of Signalized At-Grade Intersections
- Count of At-Grade Intersections with Stop Signs
- Count of Intersections without Stop Sign or Signals
- Begin Bridge Location
- End Bridge Location
- Measure of Existing Lane Width
- Type of Median
- Measure of Existing Median Width
- Type of Shoulder Material
- Measure of Existing Right Shoulder Width
- Measure of Existing Left Shoulder Width
- On Route Parking Locations
- Curve Classification Data
- Type of Terrain
- Grade Classification Data
- Sample Section Meeting the Sight Distance for Passing
- Surface Type of a Given Location
- Thickness of Rigid Pavement
- Thickness of Flexible Pavement
- Base Pavement Type
- Thickness of Base Pavement
- Presence of Curb
- Presence of Rail Road Crossing
- Start Location of Sidewalk Right
- End Location of Sidewalk Left
- Identify ADA Compliant Sidewalk

DOTD Point Feature Locations for Mapping include;

- Cemetery
- Church
- Church & School
- Church with Cemetery
- Courthouse
- Fire Station
- Hospital

- Police Station
- Post Office
- School

### **Highway Inventory Deliverables**

1. Highway Inventory Asset Manual.
2. Geodatabase file with HPMS Data Items collected. Data is to be reported on external hard drives (USB 2.0) appropriate in both size and compatibility or other approved media.
3. Asset inventory files used by Consultant to derive geodatabase. Data is to be reported on external hard drives (USB 2.0) appropriate in both size and compatibility or other approved media.

### **D. Oil Spill Route Collection**

At the start of the first data collection cycle, the Consultant shall collect video, electronic distress data and pavement distress cracking on approximately 715 Directional Miles of roadway listed below. This data will support DOTD efforts to track deterioration on routes specified as Oil Spill Recovery Truck Routes. Specific route information will be supplied by DOTD.

District 02	231 Directional Miles
District 03	234 Directional Miles
District 07	250 Directional Miles
Total	715 Directional Miles

### **Oil Spill Route Deliverables**

1. All quantified pavement condition assessment data properly loaded into the dTIMS CT import database (provided to the Consultant during Task 1 Preliminary activities) and reported in .10-mile increments as required. Data is to be reported on external hard drives (USB 2.0) appropriate in both size and compatibility or other approved media.
2. Electronic File Database (the interval the maximum of 0.004 mile) contains the standard identification information (Elementid, District, Parish, Route, Direction, Csect, From and To) and the Electronic data fields (Grade, Crossfall, faulting, roughness, rutting, GPS location, occurrence of bridge, construction zone, lane deviation, occurrence of railroad crossing, and lane width)
3. Image Database (image interval maximum of every 0.004 mile) contains Rawdata filename, Route, Csect, Direction, From Chainage, To Chainage, Video Image Path and GPS location information.
4. Oil Spill Route pavement condition assessment associated files, lane pavement surface views, pavement distress quantification results, perspective and right view for all pavement condition assessments shall

be delivered on external hard drives (USB 2.0) appropriate both in size and compatibility or other approved media, which will be loaded on DOTD's own server. This Oil Spill Route delivery shall be formatted properly to enable the automatic retrieval of a specific segment of road, viewing of its image, allow verification of quantified distresses, end user shall be able to view the minimum required 40 point rut profile (one per right of way image), and be compatible to allow linear measurements to be made from the images and the digitizing of still frame-displayed images on to a DVD recorder (section II.E.3.C.2). Raw data from the DCV's electronic sensors (rutting, IRI, faulting, pavement distress, and GPS data) shall also be included within this deliverable.

5. Copies of all oil spill route raw electronic files generated during the course of the project with software to view and convert to viewable text files.

### **ITEMS TO BE PROVIDED BY DOTD**

DOTD's dTIMS CT import database  
Louisiana Protocols for Automated Distress Collection  
DOTD's control section database file  
Pavement type (i.e. asphalt, concrete, composite) for all on-state system routes

### **ADDITIONAL SERVICES**

The scope of services, compensation and contract time for future engineering services will be established by Supplemental Agreement(s) for the following:

Data collection on NHS – HPMS routes in all three data collection cycles  
Ground Penetrating Radar in 1<sup>st</sup> cycle  
Collection of Highway Inventory Assets in 1<sup>st</sup> cycle  
Oil Spill Route data collection in 1<sup>st</sup> cycle

All additional sub-Consultants required to perform these services are subject to approval as per RS 48:290.D prior to execution of the supplemental agreement.

### **REFERENCES**

All services and documents will meet the standard requirements as to format and content of the DOTD; and will be prepared in accordance with the latest applicable editions, supplements and revisions of the following:

1. AASHTO Standards, ASTM Standards or DOTD Test Procedures
2. DOTD Location and Survey Manual
3. DOTD Roadway Design Procedures and Details
4. DOTD Hydraulics Manual
5. DOTD Standard Specifications for Roads and Bridges
6. Manual of Uniform Traffic Control Devices

7. DOTD Traffic Signal Design Manual
8. National Environmental Policy Act (NEPA)
9. National Electric Safety Code
10. National Electric Code (NFPA 70)
11. DOTD Environmental Impact Procedures (Vols. I-III)
12. Policy on Geometric Design of Highways and Streets
13. Construction Contract Administration Manual
14. Materials Sampling Manual
15. DOTD Bridge Design Manual
16. Consultant Contract Services Manual
17. Geotechnical Engineering Services Document
18. Bridge Inspectors Reference Manual
19. DOTD Stage 1 Manual of Standard Practice
20. Code of Federal Regulations 29 CFR 1926 (OSHA)

### **COMPENSATION**

Compensation to the Consultant for services rendered in connection with this Contract will be a negotiated lump sum.

Within 15 calendar days of notification of selection, a kick-off meeting will be held with the selected Consultant/Team and appropriate DOTD personnel. The selected Consultant/Team will be required to submit a proposal within 30 calendar days following the notification of selection. All negotiations must be completed within 60 calendar days following the notification of selection.

### **CONTRACT TIME**

The Consultant shall proceed with the services specified herein after the execution of this Contract and upon written Notice-To-Proceed from the DOTD. The overall contract time to complete this project is estimated to be **six years** covering three data collection cycles. The delivery schedule for all project deliverables shall be established by the Project Manager.

### **MINIMUM PERSONNEL REQUIREMENTS**

The following requirements must be met by the Prime-Consultant at the time of submittal:

1. At least one Principal of the Prime-Consultant must be professionally competent in pavement distress data collection and analysis.
2. At least one Principal or other Responsible Member of the Prime-Consultant must have a minimum of five years experience in managing projects in pavement distress data collection and analysis.

In addition to the above requirements, the Prime-Consultant must show in Section 14 of the S. F. DOTD 24-102 expertise, personnel, and equipment necessary to perform the work as outlined in the Scope of Services.

### **QUALITY CONTROL/QUALITY ASSURANCE**

The DOTD requires the Consultant to develop a Quality Control/Quality Assurance program; in order to provide a mechanism by which all contracted services can be subject to a systematic and consistent review. Consultants must ensure quality and adhere to established design policies, procedures, standards, and guidelines in the preparation and review of all design products. The DOTD shall provide limited input and technical assistance to the Consultant.

### **EVALUATION CRITERIA**

The general criteria to be used by DOTD (when applicable) in evaluating responses for the selection of a Consultant to perform these services are:

1. Consultant's firm experience on similar projects, weighting factor of 3;
2. Consultant's personnel experience on similar projects, weighting factor of 4;
3. Consultant's firm size as related to the estimated project cost, weighting factor of 3;
4. Consultant's past performance on similar DOTD projects, weighting factor of 6; \*\*
5. Consultant's current work load with DOTD, weighting factor of 5;
6. Location where the work will be performed, weighting factor of 4; \*

\* All respondents will receive a 4 in this category

\*\* The PL (Planning and Feasibility Studies) performance rating will be used for this project.

### **Complexity Level (complex)**

Consultants will be evaluated as indicated in Items 1- 6. The evaluation will be by means of a point-based rating system. Each of the above criteria will receive a rating on a scale of 0-4. The rating will then be multiplied by the corresponding weighting factor. The firm's rating in each category will then be added to arrive at the Consultant's final rating.

If Sub-Consultants are used, each member of the Consultant/Team will be evaluated on their part of the contract, proportional to the amount of their work. The individual team member ratings will then be added to arrive at the Consultant/Team rating.

### **Communication Protocol**

DOTD's Project Evaluation Team will be responsible for performing the above described evaluation, and will present a short-list of the three (if three are qualified) highest rated Consultants to the Secretary of the DOTD. The Secretary will make the final selection.



**Below are the proposed Team members. DOTD may substitute for any reason provided the members meet the requirements of R.S. 48:291.**

1. Debbie L. Guest – Ex officio
2. Chris Fillastre– Project Manager
3. Ashley Horne
4. Said Ismail
5. Delicia Justice

Rules of Contact (Title 48 Engineering and Related Services)

These rules are designed to promote a fair, unbiased, legally defensible selection process. The LA DOTD is the single source of information regarding the Contract selection. The following rules of contact will apply during the Contract selection process and will commence on the date of advertisement and cease at the contract execution of the selected firm. Contact includes face-to-face, telephone, facsimile, Electronic-mail (E-mail), or formal written communications. Any contact determined to be improper, at the sole discretion of the LA DOTD, may result in the rejection of the submittal (SF 24-102):

- A. The Consultant shall correspond with the LA DOTD regarding this advertisement only through the LA DOTD Consultant Contracts Services Administrator;
- B. The Consultant, nor any other party on behalf of the Consultant, shall not contact any LA DOTD employees, including but not limited to, department heads; members of the evaluation teams; and any official who may participate in the decision to award the contract resulting from this advertisement except through the process identified above. Contact between Consultant organizations and LA DOTD employees is allowed during LA DOTD sponsored one-on-one meetings;
- C. Any communication determined to be improper, at the sole discretion of the LA DOTD, may result in the rejection of submittal, at the sole discretion of the LA DOTD;
- D. Any official information regarding the project will be disseminated from the LA DOTD'S designated representative on the LA DOTD website. Any official correspondence will be in writing;
- E. The LA DOTD will not be responsible for any verbal exchange or any other information or exchange that occurs outside the official process specified herein.

**By submission of a response to this RFQ, the Consultant agrees to the communication protocol herein.**

### **CONTRACT REQUIREMENTS**

The selected Consultant will be required to execute the contract within 10 days after receipt of the contract.

**INSURANCE** - During the term of this contract, the Consultant will carry professional liability insurance in the amount of \$1,000,000. The Prime-Consultant may require the Sub-Consultant(s) to carry professional liability insurance. This insurance will be written on a “claims-made” basis. Prior to executing the contract, the Consultant will provide a Certificate of Insurance to DOTD showing evidence of such professional liability insurance.

**AUDIT** - The selected Consultant/Team will allow the DOTD Audit Section to perform an annual overhead audit of their books, or provide an *independent* Certified Public Accountant (CPA) audited overhead rate. This rate must be developed using Federal Acquisition Regulations (FAR) and guidelines provided by the DOTD Audit Section. In addition, the Consultant/Team will submit semi-annual labor rate information, when requested by DOTD.

The selected Consultant/Team will maintain an approved Project Cost System, and segregate direct from indirect cost in their General Ledger. Pre-award and post audits, as well as interim audits, may be required. For audit purposes, the selected Consultant/Team will maintain accounting records for a minimum of five years after final contract payment.

Any Consultant currently under contract with the DOTD and who has not met all the audit requirements documented in the manual and/or notices posted on the DOTD Consultant Contract Services Website ([www.dotd.louisiana.gov](http://www.dotd.louisiana.gov)), will not be considered for this project.

### **SUBMITTAL REQUIREMENTS**

One original (**stamped original**) and **five** copies of the SF 24-102 must be submitted to DOTD. All submittals must be in accordance with the requirements of this advertisement and the Consultant Contract Services Manual. Any Consultant/Team failing to submit any of the information required on the SF 24-102, or providing inaccurate information on the SF 24-102, will be considered non-responsive.

Any Sub-Consultants to be used, including Disadvantaged Business Enterprises (DBE), in performance of this Contract, must also submit a SF 24-102, which is completely filled out and contains all information pertinent to the work to be performed.

The Sub-Consultant’s SF 24-102 must be firmly bound to the Consultant’s SF 24-102. In Section 9, the Consultant’s SF 24-102 must describe the **work elements** to be performed by the Sub-Consultant(s), and state the approximate **percentage** of each work element to be subcontracted to each Sub-Consultant.

Name(s) of the Consultant/Team listed on the SF 24-102, must precisely match the name(s) filed with the Louisiana Secretary of State, Corporation Division, and the Louisiana State Board of Registration for Professional Engineers and Land Surveyors.

The SF 24-102 will be identified with State Project No. **736-99-1719**, and will be submitted **prior to 3:00 p.m. CST on Tuesday July 20, 2010**, by hand delivery or mail, addressed to:

Department of Transportation and Development  
Attn.: Ms. Debra L. Guest, P.E.  
Contracts Administrator  
1201 Capitol Access Road, **Room 405-T**  
Baton Rouge, LA 70802-4438 or  
Telephone: (225) 379-1989

### **REVISIONS TO THE RFQ**

DOTD reserves the right to revise any part of the RFQ by issuing an addendum to the RFQ at any time. Issuance of this RFQ in no way constitutes a commitment by DOTD to award a contract. DOTD reserves the right to accept or reject, in whole or part, all Qualification Statements submitted, and/or cancel this announcement if it is determined to be in DOTD's best interest. All materials submitted in response to this announcement become the property of DOTD, and selection or rejection of a submittal does not affect this right. DOTD also reserves the right, at its sole discretion, to waive administrative informalities contained in the RFQ.